## On the effective size of a non-Weyl graph

In the talk we will focus mainly on the resonance condition and resonance asymptotics on quantum graphs. We are interested in the number of resolvent resonances enclosed in the circle of radius R in the k-plane in the limit  $R \to \infty$ . In some cases the leading term of the asymptotics is smaller than expected by Weyl asymptotics. We will recall the main results for these non-Weyl graphs. Using the method of pseudo-orbit expansion we will construct the resonance condition and find the expression of the effective size of the graph, which is proportional to the coefficient by the leading term of the asymptotics. The main results are bounds on the effective size.

The talk will be based on the publications

J. Lipovsky, Pseudo orbit expansion for the resonance condition on quantum graphs and the resonance asymptotics, Acta Physica Polonica A 128 (2015), no. 6, p. 968-973 [arXiv: 1507.06845]

J. Lipovsky, On the effective size of a non-Weyl graph [arXiv: 1507.04176]